

Serial No. 10/623,132

Preliminary Amendment dated 02/23/2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (Currently Amended). A motor with a compound bearing
2 for [OA] an office automation (OA) device having a spindle shaft assembled
3 within a double raceway sleeve of the compound bearing [apparatus through balls],
4 the compound bearing comprising[;]:
5 two rows of balls, each row having a plurality of balls;
6 the spindle shaft formed of a stepped shaft including a reduced
7 diameter portion and a larger diameter portion,
8 an inner ring [slidably] slidingly fit over the reduced diameter portion of the
9 spindle shaft,
10 [a plurality] the first row of balls interposed between a raceway
11 formed on [the] an outer peripheral surface of the inner ring and a raceway formed on
12 [the] an inner peripheral surface of the sleeve, and
13 [a plurality] the second row of balls interposed between a raceway
14 formed on [the] an outer peripheral surface of the larger diameter portion of the
15 spindle shaft and [a] another raceway formed on the inner peripheral surface of the
16 sleeve,
17 wherein the compound bearing is [completed as the compound
18 bearing by fixedly adhering] characterized in that the inner ring is slidingly
19 fitted on the reduced diameter portion of the spindle shaft [with applying onto
20 balls an appropriate pre-load through] and an adhesive secures the inner ring to the

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21 reduced diameter portion in a pre-loaded state, and
22 [wherein the motor with the compound bearing is provided by connecting
23 the sleeve of the compound ball bearing integrally with the] a hub member is fitted
24 on and secured to the sleeve, and
25 the motor is formed by constituting said hub member and sleeve
26 secured thereto as a rotor of the motor.

Claims 2-5 (canceled)

1 Claim 6 (New). A motor with a compound bearing for office automation
2 (OA) equipment, including a spindle shaft assembled within a sleeve of the compound
3 bearing through a plurality of balls,
4 the compound bearing comprising:
5 the spindle shaft formed of a stepped shaft including a reduced diameter
6 portion and a larger diameter portion,
7 an inner ring slidably fit over the reduced diameter portion of the spindle
8 shaft,
9 said sleeve secured to and integrated with a hub member,
10 first balls interposed between a first raceway formed on an outer peripheral
11 surface of the inner ring and a second raceway formed on an inner surface of the sleeve,
12 second balls interposed between a third raceway formed on an outer
13 peripheral surface of the larger diameter portion of the spindle shaft and a fourth raceway
14 formed on the inner peripheral surface of the sleeve,

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15 wherein the compound bearing is formed by fixedly adhering the inner ring
16 on the reduced diameter portion of the spindle shaft while applying to respective ones of
17 the balls an appropriate pre-load through the inner ring, and by integrating the sleeve of
18 the compound bearing with the hub member, and

19 the motor is formed by incorporating said hub member and the sleeve
20 secured thereto as a rotor of the motor.

1 Claim 7 (New). A motor with a compound bearing for office
2 automation (OA) equipment, including a spindle shaft assembled within a sleeve of the
3 compound bearing through a plurality of balls,

4 the compound bearing comprising:

5 the spindle shaft formed of a stepped shaft including a reduced diameter
6 portion and a larger diameter portion,

7 an inner ring slidably fit over the reduced diameter portion of the spindle
8 shaft,

9 said spindle shaft secured to and integrated with a hub member,

10 first balls interposed between a first raceway formed on an outer peripheral
11 surface of the inner ring and a second raceway formed on an inner surface of the sleeve,

12 second balls interposed between a third raceway formed on an outer
13 peripheral surface of the larger diameter portion of the spindle shaft and a fourth raceway
14 formed on the inner peripheral surface of the sleeve,

15 wherein the compound bearing is formed by fixedly adhering the inner ring
16 on the reduced diameter portion of the spindle shaft while applying to respective ones of

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- 17 the balls an appropriate pre-load through the inner ring, and by integrating the spindle
- 18 shaft of the compound bearing with the hub member, and
- 19 the motor is formed by incorporating said hub member and the spindle
- 20 shaft secured thereto as a rotor of the motor.

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Amendments to the Drawings:

The attached replacement sheet of drawings provided in the appendix includes a new Fig.

3. This sheet replaces the original sheet including Fig. 3 to correct an inadvertent error in submitting an erroneous drawing as noted in the accompanying remarks.

Attachment: Replacement Drawing Sheet 1